Claims

1.   A communication apparatus, comprising a diversity structure formed by a plurality of branches,

5   wherein each of the branches includes:

a signal amplifying unit that amplifies a reception signal and is changeable a gain of the reception signal; and

a gain set value calculating unit that measure a reception level of the reception signal amplified by the signal amplifying unit and calculate

10   a gain set value for adjusting the gain of the signal amplifying unit on the basis of the reception level; and

wherein the branches share a gain set value selecting unit that compares the gain set values calculated by the gain set value calculating units of the respective branches to select a predetermined gain set value, and

15   supplies the predetermined gain set value to the signal amplifying units of the respective branches.

2.   The communication apparatus as set forth in claim 1, wherein the gain set value selecting unit selects a minimum gain set value among the gain set

20   values calculated by the gain set value calculating units of the respective branches.

3.   The communication apparatus as set forth in claim 1 or 2, wherein the each of the branches includes a Fourier transform unit that Fourier transforms

25   the reception signal amplified by the signal amplifying unit into a frequency

component; and

wherein the branches share:

a diversity processing unit that applies diversity processing to the signals outputted from the Fourier transform units of the respective branches; and

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a diversity processing control unit that compares an absolute value of a difference of the gain set values calculated by the gain set value calculating units of the respective branches and a predetermined threshold value, and outputs a predetermined signal to the diversity processing unit when

10 the absolute value of the difference is greater than the threshold value; and

wherein when the diversity processing unit receives the predetermined signal, the diversity processing unit outputs a signal of the branch having the minimum gain set value without performing the diversity processing.

15 4. The communication apparatus as set forth in claim 3, wherein, in the diversity processing, the diversity processing unit compares amplitudes of the signals outputted from the Fourier transform units of the respective branches for each frequency, and selects a maximum amplitude for each frequency to output the signal.

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5. The communication apparatus as set forth in claim 3, wherein, in the diversity processing, the diversity processing unit subjects amplitudes and phases of the signals outputted from the Fourier transform units of the respective branches to vector synthesis for each frequency to output the signal.

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6.   A program for realizing a computer as the respective units included in the communication apparatus according to any one of claims 1 to 5.